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Roorkee

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THE UNITS IN EXCHANGE

AND

A FREE CURRENCY,

BEING SUGGESTIONS FOR THE EMPLOYMENT OF A UNIT OF VALUE IN POLITICAL ECONOMY, AND THE ABOLITION OF LEGAL TENDERS IN CURRENCY.

BY

G. T. CARRUTHERS, M.A.,

BENGAL ECCLESIASTICAL ESTABLISHMENT.

THE UNITS IN EXCHANGE AND A FREE CURRENCY.

MAN's capacity for labour is derived from the use of materials already stored up within the human body, so that the amount of bodily substance consumed is the exact equivalent of the labour expended.

This labour, if reconverted into food, can produce no more than the food from which it originally received its energy.

There can therefore be no profit resulting from human labour, and the origin of profit must be referred to some other source.

This source is the heat supplied to the Earth by the Sun, for the use of which, the Sun exacts no equivalent from Man; so that of the whole labour employed in producing any definite result a considerable portion is the unrewarded labour of Nature.

The product arising from human labour in the total receipts, is the exact equivalent of what has been already spent in sustaining the labour, all the rest is the gift of Nature, and may be claimed by any one who can secure it by force, common consent, or legal appropriation.

Profit also arises from taking advantage of the method by which the Sun supplies the Earth with heat.

The heat received is supplied in a ratio inversely proportional to the square of the distance from the Sun of each point of the Earth's surface, while the cost of carriage or marching, is in the simple ratio of the distance gone. Hence it is worth while carrying productions from the equator to higher latitudes, instead of attempting to produce them in those latitudes. Other means of obtaining profit from solar energy will at once suggest themselves without further mention, such as the use of coal, of fertile lands, of lands placed in good positions for trade, &c.

We define, therefore, profit to be "that product of labour, the equivalent of which has not been consumed in this Earth in the process of labour."

A "unit of profit" is the food-supply of a "unit of labour," for all profit being the equivalent of food spent in labour, there are as many units of food as there are units of labour.

There is a directive power in human labour which enables it to place food in contact with Nature's restoring organs acting within the body in such a way that Nature is enabled to use this material of future labour, in a more effective manner than it did during the previous day or period.

The profit is therefore an enlargement of the body from childhood to manhood, the setting apart of bodily substance in children, and the storage of material within man which is to be drawn upon in age or illness.

Even this increase is not the reward of man's labour, for man only works upon what he has already received in advance, but it is the profit representing Nature's claim for work done.

When this store or profit is placed within man's own body, he claims it as of necessity his own by a gift of Nature, for none can take it from him without taking away his life.

He has also a right, by general consent, to his children as a gift by Nature, which it would be cruel to take away from him, and which would be of little use to others, the latter reason being the more weighty one.

But all the remaining profit arising from his work on the land is no more his than any one else's. He has been paid for his work, but the Man, his fellow-workman, has not; that which remains is Nature's gift to the world.

Kings claim a portion for protecting him, private persons call the land theirs, and demand a rent, so that the labouring man is fortunate if he can retain any portion of Nature's bounty beyond what he has been able to store up in his body, or can buy shelter and tools with.

It is to a labouring man's interest so to bargain that his gains from the common fund of Nature, shall be as great as possible. It is therefore to the advantage of the labouring class that they have wives and children whom they feel bound to support, for all a man obtains for them is gain beyond the cost of labour; and the additional profit thus secured is generally given back to him by his wife, in cooking and other duties, and by his children, in their support of him in his old age.

Having thus laid down as a foundation that labour only works for previous payment, but that Nature has made labour its own reward by giving to the labouring man sufficient profit from the earth, in the pleasures of existence and increase, to induce him to continue his labour, I proceed to the subject of the value of labour and of all commodities.

All existing things may be classed as the product of previous labour—labour of nature and labour of man—and their value lies in their power of supporting future supplies of labour. Capital is thus the granary of labour, both the harvest of past and the store-house of future labour.

Capital is erroneously called "accumulated labour," but such is not its character. It is the profit of labour, but its value lies in its being the food supply of future labour. That which is not useful is useless in all matters of trade and exchange, and a thing's value lies in the extent to which it is or can be made useful towards supporting labour or inciting men to it.

I would define the value of a thing to be, "the present worth of future expected profit to be derived from its use;" and I shall show in the sequel that a "unit of value" is equal to "a unit want" of which the measure is "one foot-pound."

Exchange will take place when two persons are assured that by parting with their respective goods, they will secure as much future profit by the one thing as by the other, and will at the same time gratify equal desires, or satisfy equal wants.

The present worth of future profit is the discount of profit, which is calculated by the same rules as those which guide men to accept cash in lieu of a future annual payment of money.

There are circumstances under which the statement may be approximately true that, "the exchange-values of two commodities bear a ratio to their cost of production;" but as it gives no clue to the exchange-value of lands, and would even lead one to maintain, that an old hat is worth as much as a new one, since both have cost the same, it has evidently failed to grasp the true conception of value.

Because two men choose to accept the same sum of money for their respective commodities, it by no means follows, though it is probable, that the cost of each work has been the same. The fact only shows that the men are satisfied with the money received, and they are satisfied because they have no reasonable hope of getting a greater sum for their work.

If a man loses money by a wrong calculation, he will endeavour not to do so again; and, therefore, every man tries to regulate the cost of production by the anticipated profit, but we must not confuse two ideas and

say that the profit one hopes to get is the same in value as the labour we have already spent. One has no necessary dependence upon the other, as every one who by chance picks up a nugget of gold will stoutly maintain.

That land is sold for the profit which can be obtained from it, is evident. The cost of the labour in making it productive is not nearly so important an element in its value, as the natural advantage of its position, with reference to the market of trade and labour, but the knowledge of these advantages is only valuable, as a means by which future profits may be calculated.

The seller estimates all the advantages which the land possesses to be capable of producing a certain sum of money a year, after all expenses and fair profit on capital are paid, and he is ready to part with the land for the present worth of that sum at so many years' purchase. He parts with the land because he thinks he can do better with the present worth of its annual profit, or because he is offered more than the land is worth to him.

If land is sold to be a pleasure-ground, the constant pleasure which it is able to give is the future profit to be got from it, and this can only be estimated by the profit one is ready to sacrifice for pleasure's sake. It therefore will not be sold for less than the present worth of what could be got out of the land in rent, but how much more can be obtained for it will depend upon the number of other suitable pleasure grounds which are for sale in the market, and the ability of the purchaser to sacrifice the profits of ordinary labour.

Again, take the value of an invention of small cost and high price. Here Mr. Mill is obliged to bring in the notion of high skill which no one can estimate in terms of ordinary labour except by the profit it can produce, but this is the very point to be decided in fixing the value of it, and how are the buyer and seller to agree on such a fundamental point? It is thus decided. The inventor says, "I have the command of the market by legal right, and as I calculate the invention will yield me a profit of so much a year until it is worn out, in addition to the profit I could get from the capital necessary in its use without using the invention, I fix the present worth of that profit at so many years' purchase."

It is then left to the buyer to decide if the profit expected is sufficiently tempting to him or if the true profit will really be such as predicted. If the inventor's estimate is too high he must lower his terms or take the risk of production himself.

Take now the ordinary cases of barter.

In the exchange of perishable but productive things, one offers, say, bread, and the other his day's labour, and let the produce of a day's labour in the field be the production of two loaves, one, representing the material actually expended in labour, and the other the profit of Nature.

The labourer in the bargain will urge that his labour is worth two loaves one day hence, while the baker will say, that one loaf eaten now will enable himself to produce two loaves at the end of the day, so that one loaf now, is the present worth of two loaves one day hence. If such is the rate of interest in the market and the labourer cannot get sustenance for the day, except at the sacrifice of all the other profit to be derived from his labour, he will accept the baker's offer. The baker's offer would be just, because he could himself go to work and gain the two loaves, supporting himself with the one loaf while labouring.

When the goods are capable of preservation, better terms can be offered. Let the bargain be between salt fish and labour. The fish-seller, having 30 day's stock of fish on hand, sufficient for his sustenance during that time, would gain by selling to-day his 30th share for a day's labour, for the present value of the fish would only be the provision for himself of a day's sustenance 30 days hence, and any day's labour to be granted him at less than 30 days' after date, would leave him the gainer. But the buyer would not take as little salt-fish as he would fresh for a day's labour, and thus the salt-fish seller would undersell the fresh-fish seller, by offering more than one day's food supply to the labourer, trying to dispose of his labour to the best advantage.

In the exchange of two unproductive commodities we may take two trifling things, like a pair of gloves and a neck-tie. These are the result of previous labour obtained by fashioning natural commodities and the human labour is represented by the woof of the neck-tie and the shape of the glove, while one will wear out in a week, and the other in a night.

The future profit to be obtained from the use of these articles is entirely a thing of sentiment. If the holder of the blue ribbon will sacrifice his joy of a week for the bursting of a pair of gloves at a ball, and *vice versâ*, then other things being equal, there will be an exchange.

But because the future profit of the articles is a profit resulting from mere fancy and sentiment, it can have no element of certainty by which

the present worth of the articles can be estimated. Hence the value which the seller will endeavour to fasten upon the articles, will be entirely independent of cost, and only what he thinks he can get for them.

The thrill of a moment he may, perhaps justly, estimate as worth a month's labour, he will therefore ask a price which shall be the present worth of a day's labour for a month. But lovers of pleasure, though ready to sacrifice labour, will not do so heedlessly, and they will ask themselves whether they cannot find some one who will estimate their joys at a less price.

Hence in a large market there is a competition produced, which gradually brings the selling price down nearly to the cost of production and often even lower, for the pleasure seekers will buy of a bankrupt at less than cost price, while old-fashioned persons who love old-fashioned things, which have lost their power of pleasing the multitude, may buy a poke-bonnet at the mere price of the old materials, and this strictly will be the present worth of the future profit expected from the article; yet how can it be said to have a value comparable to the value of the bonnet of the season, which has cost no more in its production!

Then, again, there is all the difficulty of estimating the amount of cost which must be struck off the total cost of producing a thing because of the bad or careless labour which has been bestowed upon it. Who shall decide what is lost labour and what not, or who shall declare the measure of that which is lost and which cannot be gauged but by the seller's declaration? It is manifest that neither party in an exchange pays any attention to what is said by the other to have been the cost of his commodity. His sole object is so to exchange what he has himself got, that what he receives may bring him the greatest profit possible. When there are several things to choose from which bring equal profit, the buyer will take that which costs him the least expenditure of his own capital. In exchange, therefore, the exchange values of two things bear a ratio to the profits expected from them.

But the mere fact that two articles produce the same annual profit, or are worth the same sum of money, is not sufficient to make those articles change owners. If the owner of a house goes to another and says, "our houses are equal in pecuniary value, I want an exchange;" the other will answer, "If you want an exchange you must make it worth my while to move, your 'want' has considerably increased the worth of my property."

This theory of want introduces the whole system of monetary transactions. To the seller of fish-nets who buys a fish for dinner every Friday, it is a serious matter that he has to pay for 50 wants to the fisherman's one want of a pair of new nets every year, and therefore he becomes a general dealer, so that the fisherman may want as often from him as he does from the fisherman.

But most articles of merchandise require looking after to preserve their value, and as an engine-driver cannot use horses and drive his engine at the same time, there arises a difficulty in dealing in all kinds of wares.

Hence came the necessity of discrimination in dealing, and men came to exchange only with some few things in general demand.

Food for man and beast would of course be the resort of most dealers, but as, from motives of cleanliness, men would not buy bread from a scavenger, and so, trade in that direction became limited to a few; the next best thing became the supply of women's wants which men provide for with great readiness in all countries. Gold and silver for the rich, and pretty shells, brass and copper for the poor, were things which every man was ready to take in exchange, so that a man might say: "I do not want your house, but I do want your gold, and upon that ground we have equal wants, give me the present worth of your house in gold, and I will then readily give you my house in exchange."

Hence the first use of money is for profitable barter, but it receives additional value as an article of exchange, which all are ready to take in payment of their own wares.

The stamping and coining of money was originally an act of the State, to protect the trader and especially the tax-collectors from deception as to the weight and quality of metals, and meant no more than the stamping of market weights and measures does now. The relative values of the metals to one another, was a matter, which very properly, was left to the merchants to decide each for himself, on the broad principles of exchange and barter.

The cost of coinage is from one point of view a loss to the State, but the advantage of having a single article of exchange, already stamped by the State, and divided into sufficiently small units, so that State officials can readily collect their taxes and public charges is a complete reward of the cost of coinage.

The mint on the other hand is readily supplied with gold or silver

without purchase by the people, who value refined and weighed gold more than commercial gold, if they have no means of quickly disposing of those metals in more profitable ways.

When it is said that gold is unproductive all that is meant is that, labour with it as you may, you can never do more than change its form. It will never yield you an increase by the labour of the Sun and rain. It has a slight value as a saver of labour in pen-making, and such things where gold out-lasts steel, but its profitable value lies in its lasting beauty, and its usefulness as a medium of exchange. The possessor of it may have got it by a lucky find or after enormous toil, but the value he will put upon it is what he thinks others will pay for lasting beauty in days of labour, or rather of the food supply which procures labour.

Daily labour is too indefinite an expression for accurate purposes of calculation; it has, therefore, long ago been found necessary to define what is meant by a unit of work.

"A unit of work is the labour requisite to raise one pound weight through the space of one foot."

No account of the time taken to perform the unit of work enters into the definition, but it is found that a man rowing a boat for eight hours performs about 4,000 units of work.

It is necessary also to define what is meant by the value of a unit of labour, and the value of that labour which produces a unit of profit.

A trader wishes to have only one risk, and that is the risk of the sale of his prepared commodity. Risks from false calculation of labour or profit are avoided as much as possible, so that he cannot accept an average cost of labour or an average rate of profit in estimating what the making of a thing may cost for the actual labour or profit might in his case be very different to the average calculated.

An unit of labour has for its value or present worth a unit of food, and whatever this unit of food may be, it is equivalent to the energy obtained under gravity by the fall of a pound one foot.

The unit of food is thus the exact support of the unit of labour, but as the pound weight falls in food-supply equally as fast as it rises in the act of labour, the weight will at the end of the operation be lying upon the ground just as it was at the beginning. Hence, no labourer who has his capital of unit food will work merely to restore it, if he can avoid doing so, nor will a seller part with a unit of food merely to get

the same again, but if he can discover what is a unit of food, he knows exactly what labour will cost without profit.

Profit, however, bears no such simple relation to labour, as the quantity of food required to maintain labour does.

We might indeed say, that the value of a unit of profit obtained from the application of a unit of labour is equal to the *vis vivâ* of a unit of labour, for to produce that profit there has been expended the food or capital, and the unit of labour itself, but the receipts from labour are not a necessary consequent of human labour, because man works uncertainly and does not assuredly know that nature will assist him in his labour, nor to what extent, so that many units of work may be expended before a unit of profit is obtained.

For instance, in digging a well, little or great labour might be used by man, but the profitable result would depend upon the work of nature at that spot, which man could only previously guess at. A merchant is, therefore, not sufficiently satisfied by mere statements of what the profit arising from an article may be, for in exchange one party would maintain that gold or precious stones would be the result, and the other would assert that the article would be unproductive.

There is a difficulty, also, in deciding what is the supply of food which can support labour, for every labourer has his own idea in such a matter, and indeed the supply of food is really different for every labourer, as one requires more and the other less, to produce the same result. The fall of the unit pound, one foot, would thus be the mean result of the food supplied, much of that food acting in different directions—some falling, some rising—so that the supply itself might consist of several pounds of material for food, producing the final result of the fall of one pound one foot.

A day's labour cannot therefore be expressed in terms of food, so that one measure shall be common for every labourer, nor can profit be measured as worth the same number of units of labour by both parties in an exchange, since it is entirely a matter of probability what the profit will be, but there is still left an accurate method of finding the value of an article, and that is by studying the wants of men.

Men will always work to satisfy their wants, and when men work very hard and constantly, it is known that they expect some great profit to follow.

Moreover, even suppose it were possible to fix the unit of expected

profit accurately, so that we might be quite sure that so much profit would follow so much labour, yet exchange depends upon the want which one expresses for a thing, being satisfied quite as much as upon the conviction that the units of profit to be obtained by the transfer have been accurately calculated.

Hence it would tend greatly to simplicity in dealings if the value of a thing could be expressed in units of want, which would include the units of profit, but whether this could be done or not, a unit of want is needed in political economy as much as a labour unit, and the object of this Essay is to show, that a true unit of want is the one thing necessary to enable Political Economy to take its place as an exact science. We proceed, therefore, to define what is a unit want.

When a man picks up a stone from the ground he obtains the result of Nature's work carried on for millions of years. It is a pure gift to him or he can claim it on some ground, that ground cannot be that he has laboured to produce it. What is the ground? simply that he wants it. There are other stones upon the ground, why does he not claim them? simply because he does not want them. Therefore that stone is the measure and satisfaction of his wants in the matter of stones. He has no right to the stone over his fellows till it is in his hands, but if they then want it, it will no longer be the case of a want to be gratified by a bountiful nature, but a want to be sought from man, and he will certainly require a recompense. His demand will depend on the vehemency of their wants. Suppose there should occur a sudden revulsion of feeling, then the value of the stone would cease except in his own estimation, and perhaps the desire of the approbation of his comrades in matters of taste would master his own want of the stone, and he would throw it away.

If many wanted the stone, he would fix an equivalent for which he would give it up. This value would most readily be found by holding an auction and selling it to the highest bidder.

But if all men would be satisfied with similar stones, and abundance of these were to be had by a day's labour, he would still have the command of the market as he could offer the stone at once, and no one else could offer its like under the delay of a day. By offering the stone in advance he gives to the buyer the enjoyment of the stone a day sooner than the buyer could himself get it by labour. A fair exchange would

take place if the buyer makes over to the seller not only the food which a day's labour requires, but the labour itself, so that the seller may reap whatever the product of that labour may be. Suppose a similar stone is the product, (which is all the buyer expects to get by his own labour,) then the seller of the first stone gets a day's labour and all its hoped for profits without spending the food of a day's labour. This food plainly is the exact worth of the enjoyment experienced by the buyer in having the stone in advance, for when he gets the stone into his hands he might himself resell it to another for a day's food which all are ready to give, and working on that food he would get a stone at the end of the day as the seller does. Thus the bargain, though not its issue, is satisfactory to both parties. The example illustrates also the principle of exchange, that a man works for another only when he can get more profit by doing so than by working on his own account. The want of the buyer to buy was paid for by the loss of a day's free-will—the want of the other to sell was paid for by the loss of a day's enjoyment of the stone.

Let the stone be a pound in weight, then the labour of raising this stone a foot high would require as an equivalent that the stone should have fallen a foot under gravity on to a perfectly elastic surface. If the stone weighed only half a pound then the unit labour would require a previous fall through 2 feet, and so if the stone weighed $\frac{1}{16}$th of a pound the unit of labour would be satisfied if there had been a previous fall through 16 feet.

So far, therefore, as the labour of finding a stone is concerned, it makes no difference what its weight is if the distance or height gone to find it is such that the product of the weight and height of fall makes up one unit of work in all cases.

But in all future transactions, if the owner carries this stone about with him, the carriage of a pound weight will be a much greater loss of labour than the carriage of $\frac{1}{16}$th of a pound, and every buyer will desire as a handy medium of exchange that the unit of value should be some small weight requiring many days labour to procure rather than a heavy weight obtainable in one day; but which, whenever he wanted to go from one market to another would require a day's labour to convey thither.

All the materials of the earth are useful or desirable in some degree or another to every man. Every man therefore could if he wished

arrange a table of wants, and against each substance wanted place the number of days labour he would be prepared to give in exchange for it, either for ready possession or at the completion of the labour.

But a want impels a man to labour in the same way that the earth's elasticity compels a falling stone on striking the earth to rebound. Our wants also are a measure of our necessities, for when a man wants a day's food we know that he has no stored up capital left to enable him to perform his next day's labour.

A man's unit want is therefore a measure of that supply of food which he requires to perform a unit of labour. The amount of the food in weight may be much or little, but it is for him the exact worth of a unit of labour, and as it can produce no more than that labour, it is equal in effect to the abstract unit of food which produces a unit of labour or the fall of a pound one foot.

Now, profit is the food supply of solar labour, and as the amount of that labour is unknown, while the profit is known, we are entitled to imagine that the commodities of profit can all be condensed and arranged into one kind of matter of such efficacy as food that one unit pound of it is sufficient for a unit of labour, and, therefore, this pound falling for a foot may be taken as equal to one unit of labour.

Suppose, therefore, a merchant dealing with this kind of food enters into barter with the labourer whose want is of five pounds of food of some kind, there will be no exchange unless the labourer is prepared to give him in return five units of labour for five pounds of this precious food supply.

If the labourer wants five pounds of general food to produce one unit of labour only, he can only meet with success in dealing with a merchant who has an article of food to dispose of which has its energies so dispersed throughout it that five pounds of it will do no more work than one pound of the other.

If, however, the labourer has many other wants, he may pick out from the commodities so desired such a one that its weight is only one pound, and yet his want of it is equal to a unit of labour.

Then the five pounds of food, and the one pound of this new commodity, will each be worth or equal to a unit of labour, and therefore they will be equal in value to one another. So that he has now obtained a unit pound weight of matter equal to his unit want which compels

him to perform a unit of labour. The nature of this pound by which it is distinguished from other matter has now to be laid down, and a measure given to the unit want.

The similarity of a want to the rebounding energy of a fallen stone suggests the method by which a unit of want may be measured.

A person having drawn up his table of wants with the units of labour opposite to them, might take as his unit want that weight of one of the substances which, falling for a second, under gravity, would rebound to such an extent as to perform a unit of work.

Thus suppose he was ready to give a unit of labour for the $\frac{1}{16}$th part of a pound of silver, this would be his unit want for such a weight falling for a second would obtain on striking the Earth a velocity of 32 feet a second, and would then rise 16 feet, the work done on the rebound being $\frac{1}{16} \times 16 = 1$ unit of labour.

Having thus obtained an expression for his unit want, he would be ready to pay for all the other things he wanted a definite portion of silver instead of the due amount of labour which he had placed against his wants in the table.

Suppose three items to have been thus tabulated. "I am ready to give one unit of labour for $\frac{1}{16}$th pound of silver, four units of labour for $\frac{1}{16}$th pound of wheat, 16 units of labour for $\frac{1}{16}$th pound of gold—then the silver being the unit want, the wheat would be valued at four wants and the gold at 16 wants, so that instead of labour he would now be ready to give $\frac{4}{16}$th of a pound of silver for the $\frac{1}{16}$th pound of wheat, and one pound of silver for the $\frac{1}{16}$th pound of gold.

So long as the unit want remains constant, that is, in the instance we have chosen, so long as $\frac{1}{16}$th pound of silver falling for a second under gravity is the expression of the want of $\frac{1}{16}$th pound of silver which a person is willing to give a unit of labour to possess, it is evident that changes in the value of the other products in the table would only require to be met by the person's giving greater or less quantities of silver according to the nature of the change of value. Thus, suppose his want of wheat changed from his being ready to give four units of labour for $\frac{1}{16}$th pound of wheat to his being ready to give only $\frac{1}{16}$th of a unit of labour for it. Then the value of the wheat would be the $\frac{1}{16}$th of a want, and the amount of silver he would give, instead of labour, for the wheat would be $\frac{1}{16} \times \frac{1}{16}$th of a pound of silver.

Of course the person might take as his unit want, the fall of a piece of earth or a cow about to calve, duly selecting the time of fall necessary to yield the unit of labour, but in such a case the profit due to the working of Nature during the time of labour would greatly complicate calculation, for while the earth was falling it might receive an increase from the Sun and rain, or while the cow was falling it might calve, and thus the unit of work which would follow in the rebound from this fall would be due to gravity, and perhaps along with it some other power residing in the earth or calf, and who would be able to estimate the proportion of this additional energy which would have to be allowed for in the total energy producing the unit of work.

But when gold is taken as the unit of weight, no wheat or gold would be produced by it during the time of fall, while the use that man could make in that time of the unit of gold in such productive works as would result in a saving of labour, and therefore might expedite the ascent of the weight raised one foot—this use is so small in the case of gold that it may be left out of the calculation.

There is no inherent necessity, however, that one should always give a unit of labour for a certain weight of gold, and, therefore, the unit want would not be a permanent weight, if gold were used.

Labour requires that its food should be supplied in advance, and the energy given to a stone by which it rebounds is also a supply in advance, so that in this respect the want which is as energetic as a fallen stone is the present worth of a unit of labour. But we require to eliminate the notion of time from the unit of want, for as the unit of labour can be performed in any time, a unit supply of food given in one second might be immensely beyond the present worth of the labour.

We must, therefore, assume some hypothetical unvarying want which the world always has of some substance such that a man is always ready to give a unit of labour for a pound weight of it.

This is a legitimate assumption, for one can always combine portions of different substances with portions of units of labour attached to them so that the whole becomes one pound of the conglomerate substance for which a unit of labour is freely given.

As every man has his own idea of what his wants are, the contents of the pound weight will vary in character with each person who uses it, and the proportion of each substance making up the pound may never

be the same in any two cases, but the essential requisite is fulfilled when every man measures his own wants by the fall of a pound weight which he is ready to give his labour to possess.

As the pound weight is made up of readily removeable particles, then, if in the act of falling any particle receives an additional acceleration besides that of gravity, that is, if any labour from the Sun and rain is added or any productive energy is given by man's genius to a particle so that it shall have the power of doing more work, or if the want of any particle changes in intensity during the fall this particle may be supposed to be immediately removed and another put in its place endowed with the acceleration proper to that point, so that from the beginning to the end of fall no other force than that of gravity acts upon the falling pound; and, therefore, a true measure of a unit want is obtained by the fall of a pound through one foot.

In practical life the want of gold may be considered uniform in the same man, so that the fall of a pound weight of this unproductive metal may be taken as sufficiently accurate for the unit measure, but the unit of labour will have to be taken sufficiently large to correspond with the amount of labour which the person is willing to give for a pound of gold.

Or, it is possible by means of the unit want already obtained, to measure the same in gold without any further notion of time being introduced. Thus, suppose one is ready to give 20 days' labour of 2,000 units each for a sovereign, then the weight of the sovereign being $\frac{493}{23040}$ of a pound, the person will take $\frac{493}{23040 \times 40000}$ of a pound for a unit of labour. Then this amount of gold falling through the inverse number of feet, or $\frac{23040 \times 40000}{493}$ feet, will accomplish a unit of labour, and this number of feet will express the intensity of the want of gold in comparison with the want of the hypothetical food whose measure is one foot.

From this conception flow our definitions:—

1. A unit want is satisfied when sufficient food, or stimulus of some kind, has been received to produce an energy capable of being converted into a unit of labour. It is expressed by "the momentum due to the fall through a foot under gravity of that pound weight of matter which a person will exchange for a unit of labour." Its measure is a foot-pound.

2. The units of want contained in the desire for a pound weight of gold are expressed by the number of feet through which a sovereign must fall, so that on rebounding it shall accomplish as many units of labour as the person who wants the sovereign is prepared to give for it.

3. The want expressed in feet of any unit weight of a commodity is inversely proportional to the weight of it which a person will exchange for a unit of labour, and this want may be expressed in units of gold by the second definition.

4. The profit expected by any person from the use of any thing may be expressed by the number of units of labour which the thing will probably produce or support; or, by the pleasure or gratification of some kind or another, which it will give, but this also is estimated by the number of units of labour which a person is ready to sacrifice to obtain the gratification.

5. The value of a thing is the present worth of the profit expected from it, but this is equivalent to a certain number of units of labour, and the present worth of a unit of labour is a unit of food, which is the same as a unit of want, of which the measure is one foot. Therefore, a "unit of value" is equivalent to a "unit want," or is expressed by one foot.

An example of the use of these definitions is here given.

"A certain weight of gold is offered in exchange for a pound of silver, $\frac{1}{20}$th of a pound of silver being worth a day's labour of 4,000 units. What is the weight of gold which will be required to satisfy the equal wants of the silver seller, if the sovereign is valued by both parties as worth 20 days' labour of 4,000 units each?" Here, by definition 3, 1 unit of labour is worth $\frac{1}{4000} \times \frac{1}{20} = \frac{1}{80000}$ of a pound of silver, or one pound of silver is worth 80,000 units of want in feet. The sovereign weighs $\frac{493}{23040}$ of a pound, and is worth 80,000 units of labour, therefore, by definition 2, one pound of gold $= 80{,}000 \times \frac{23040}{493}$ units of want in feet; therefore, one pound of silver is worth $\frac{493}{23040}$ pounds of gold, or is worth one sovereign in the case supposed. This result is a complicated way of showing that if a pound of silver and a sovereign are each equal to the same thing, they are equal to one another.

But the interesting point to notice in the results which we have

arrived at, is that the common sense of the world, in choosing gold as the great medium of exchange, has picked out that particular article of commerce, which most accurately expresses and measures the value of labour. There are complications depending upon the use of any other material than an unproductive metal to express the value of a unit of labour which would quite prevent accuracy of calculation.

For instance, since a unit of food is equal to a unit of labour, it has been proposed by some to estimate a unit of labour by its chemical equivalent or by a quantity of wheat sufficient to support life.

But wheat is itself the product of both solar and human labour, and therefore until one knows how much solar labour has been used in its production, so that the weight of wheat can be divided by the units of labour engaged in producing it, the assignment of any unit measure of wheat as the worth of a unit of labour is mere guess work, and such a unit cannot be employed by business men who require to be accurate as much as other people.

In practical trade the unit of labour would be found too small, perhaps a pound able to be raised one mile would be more suitable, as it would express a day's labour of 5,280 units.

Those accustomed to take the sovereign as the measure of value may, perhaps, think that by using units of value in the calculation of what a thing is worth, the sovereign loses all definite value, and may stand for any thing, for if its value consists in being equal to a number of units of want, which number each man fixes for himself, it may at the same time have two or more distinct values. This, however, is a misconception of the nature of an exchange with gold.

For instance, let a banker who knows the exact worth of a sovereign, or what it will buy in the market, be engaged in an exchange with a farmer, who wishes cash for a load of wheat.

The farmer has many labourers in his employ, and estimates what the wheat would be worth to himself in feeding them, so that he gives his wheat a high value, but the gold he thinks of only as something which he is to keep by him in a box till the time comes to pay his rent.

The banker on the other hand has a keen perception of the many uses to which he could put gold so as to make it yield a profit while the wheat is being slowly consumed in his house. These parties to the exchange have, therefore, quite different ideas as to the value of a

sovereign, but an exchange nevertheless will take place if they both, calculating all the values of their goods, come to the conclusion that the total value of the wheat to the banker is equal to the total value of the gold to the farmer. All transactions in trade are of the same kind, and a sovereign has no fixed value in exchange.

It would be a mistake, therefore, to attempt to publicly declare what a sovereign should be taken as worth in units of labour, silver, or any other commodity, for every man forms his own opinion in that matter, and nothing can make him change it.

A sovereign is what it is, just like a pound of wheat is only a pound of wheat. The value of each is fixed by the possessors, and may vary a hundred times a day according to fancy or speculation, but no buyer will take either gold or wheat except at a valuation agreeable to himself. That value so fixed is, by him alone, measured as containing so many units of want or foot-pounds, and all other things being measured in feet by him, he is able to compare the values of these things with the value of the sovereign.

There is a difficulty, perhaps, as to the borrowing of gold.

Gold may be lent out to interest on the understanding that the parties take all the risk of the rise and fall in the value of gold, and that the creditor shall receive back the same weight of gold finally. In this case the interest must also be made payable in gold, in order that the interest may vary equally with the principal. But this method of borrowing is contrary to all rules of safe trading, for the rise and fall of gold is not controlled by the borrower, and by accepting such a bargain both parties lay themselves open to a charge of wild speculation, (so far as the nature of it is concerned,) and ruin may be the consequence. The only way to avoid this would appear to be that all borrowing should be in units of value, and that re-payment should be made in the same.

Suppose one wishes to borrow 100 units of value. There would require to be an agreement come to between the creditor and debtor as to what should be the unit want. Let them agree that a unit of labour is worth two shillings, and that a pound weight of half a dozen or more different commodities of equal weight can be bought in the bazaar for two shillings. Then the fall of this pound one foot would be the unit want, and a sovereign would equal ten wants. The borrower would therefore borrow ten gold sovereigns.

On his returning the loan, if the half dozen chosen commodities can then be bought in the bazaar at exactly the same price as at first, so that one pound would be worth two shillings, there has been probably no change in the worth of the sovereign; but suppose a pound-and-a-quarter is the weight of the chosen metals got for two shillings, then one pound would equal $\frac{8}{5}$th of a shilling, and ten unit wants would be worth 16 shillings instead of a sovereign, so that in repaying the 100 wants the borrower would not give back ten sovereigns, but only 160 shillings in gold.

The variations in the money market have lately been so violent, that a wise man ought not to borrow money without taking some such precaution as I have pointed out as to what value is to be repaid.

When money is borrowed for a long term of years it is mere speculation to agree to repay the same amount of gold which has been borrowed.

In the daily transactions of trade, in which gold may be taken as of one constant value, the sovereign or pound of gold is the only needful unit of reference. Thus in the previous example, one pound of gold is equal to $80{,}000 \times \frac{23040}{493}$ units, therefore, one pound of silver, if it is 16 times less valuable than gold, can be expressed as worth $\frac{1}{16}$th of pound of gold, or as containing $\frac{1}{16}$th the number of units of want; and so also all other commodities would have a ready and accurate value assigned to them in gold or feet, and it is evident that variations in these values are easily rectified so long as the pound of gold contains the same number of units.

Let us now suppose that the sovereign and, therefore, the pound of gold changes its value through an increase of the gold supply or a decrease of its want, so that persons will not give the same amount of labour for the standard weight of gold which they did formerly.

If the decline in the want were very great it might be advisable to change the metal of exchange altogether, and thus it is that shells gave place to copper and silver to gold, but as the decline or advance is very slight within which the value of gold varies, merchants prefer retaining gold to express their wants in. This can be retained without loss, either by altering the units of labour and want, so as to destroy the standard value of a pound weight or a foot, which is quite out of the question, or by making all calculations by the day of labour, and then

varying the number of working hours in a day according to the variation of gold. The units of value and want are thus permitted to retain their constant ratio, but when a man estimates what labour he will give to satisfy a want, he does not say six or 10,000 units, but a day of six or ten working hours, and he remains idle for the rest of the day; or if he does not wish to make so great a sacrifice to pleasure, he will work what is called "over-time."

In this case the hours have to be turned into units of labour and the cost of labour can then be calculated.

Probably the foregoing remarks are sufficient to explain how it is that merchants having utterly dissimilar articles for sale, and the profit from which may differ in kind as much as pleasure does from the book that produces it, are yet able to assign values to their commodities in feet as accurately as a yard measure tells the number of feet in a piece of cloth; and also how it is that these feet are then able to be accurately expressed as equivalent to sovereigns or other coins of gold or silver, and how it is that in this form the values of the commodities are readily comparable, and can exchange equally with the gold as with one another.

We pass on to general subjects of exchange which have an interest at the present day, and shall refer especially to those which affect the people of India. The first topic is that of a Legal Tender.

The essence of a tender in gold, proclaimed by law, is that when a person in your debt proffers payment in gold to you, you cannot refuse the gold, but you may refuse silver or any other commodity which he offers.

In the eyes of the debtor, also, gold has the advantage of being such a commodity that the creditor cannot refuse to take it if it is offered to him in payment. Gold, therefore, has in exchange an advantage given to it by law which does not naturally pertain to it.

Let two traders be engaged in exchange—one possessing gold and the other coal. All the profit expected by the use of the coal makes up a certain number of units of value. But to the profits arising from the use of gold, one is added which the other cannot claim—its power of paying debts. For this the gold merchant will expect an equivalent to be set off in coal just as much as if it were a unit of labour. If he had dug the gold out of the mine, that little advantage given to the

miner of being able to pay his debts with his gold without previous bargain, is a pure gift for which he has to thank the State. It is worth to him a unit or two of labour.

Let us suppose now that a third person desires to make an exchange with his wheat. He has before him the choice of 100 units of value of coal and 100 units of gold, there is no reason why he should buy one more than the other as he would make the same profit out of either, but now comes in the advantage which the gold has in its legal tender.

The gold miner will say, "I will let you have my gold for 99 units, for the other unit which I put on to the value has cost me nothing, it was a gift by the State." He is thus able to undersell the dealer in coals.

Let a man have a choice of becoming a trader in gold or silver, he will argue, "if there is any depreciation in silver from the market price, that loss may prevent my paying a man's labour which I engaged in working the silver, but any such loss in gold by high prices will not affect me if it goes no further than the taking away the extra value I put upon gold because of its being a legal tender."

Other things, therefore, being equal, he will prefer dealing in gold to silver.

Both in buying goods and in the power of underselling a neighbour, and also in the less capital required to produce similar profits, the possessor of gold has the advantage over all competitors. Gold naturally, therefore, becomes the medium of exchange, for every one wants it.

Now, no one will pay for a want if he can avoid it, and he will not take silver if he can get gold. Even if the two metals are offered in the rough in the market at their market value, gold will be preferred, for all that is necessary is to put the gold into the mint, and it comes out with a new value attached to it which the holder has not paid for, as mintage fees are not charged for gold.

Thus, the law of a legal tender undoubtedly affects barter and exchange. Suppose, however, that there was no law in the matter, then goods would sell at their exact value, and no advantage would accrue to the seller of one kind of goods to the detriment of the other.

In a free currency all things have an exact exchangable value. Gold, beads, tusks or silver have each such a value that the weight into the

height of fall, or labour which will be given for it, is exactly equal to one unit of labour, and it makes no difference to a man which of these articles he takes for another.

If a creditor should wish to be paid in gold, this would be an advantage claimed; but advantage, pleasure, and such like, are exchangeable commodities which can be expressed in units of labour, and the borrower would require that there should be a "set off" to the claim for gold in his favour. In free barter, as there would be no pressing necessity to pay in gold, every trader would seize his opportunity of dealing in one or other of the metals, and every kind of metal convenient for exchange would be in full demand. The trader who demanded to be paid in gold would have to pay more than the man who was content with silver, and thus the whole trade of a country would run smoothly.

In the Law Courts, if a debtor made no promise to pay in one kind of tender he would be allowed to pay how he liked, and that he paid enough would probably be decided in his favour if he offered the same thing that he was lent or the money current in the bazaar.

The effect of introducing a legal tender where there was not one previously is very grievous.

Let us suppose that in a country there are ten millions of silver, doing duty in payment of debts and other exchange operations. This silver has been worked for, and in the home market where it is, it has a recognized value equal to the support of a large number of days' labour. The silver is retained in the market by the fact that cost of carriage elsewhere would swallow up any profit that might be made by selling it in the nearest market. Directly the law of a gold tender comes into force, the market of silver as a medium of exchange is at once destroyed, and nothing can recover it. Its use for ornament and in the arts is small, and therefore the whole of it must be shipped to another market, and the country has to bear the loss of all the cost of carriage. The difficulty of pushing so much silver into the nearest market lowers the price of the silver there, and the end of it may be that the cost amounts to carrying all that silver round half the world.

There is also another loss, gold in the nearest market had its natural value representing so many days' labour, when sold in the gold tender market, less cost of carriage, but the sudden demand for it in the new market was equivalent to adding so many additional days to its labour

value, all this has to be paid for, and the worst of it is that by and by the large supplies of gold which enter the market reduce the immediate demand, so that all the excess value of the gold which the first purchasers gave is entirely lost. Indeed the loss is so prodigious that a legal tender for gold can only be carried through in a country where gold is already so commonly used in payments of debt, and in exchange that the disturbance of trade is not so overwhelming.

Where there is a law of a double legal tender of either silver or gold, there is really a double risk of disturbance and loss. Some persons think that because the two metals are bound together in one unvarying ratio, there is no difference between such a tender and that of gold—but this is not so. Let us take some large silver mines, such as those of America, and suppose that these mines supply the world with silver in exactly the proportion necessary to supply all demands of exchange and wear and tear, then the silver will be arranged round the mines in concentric rings such that the cost of carriage will prevent the silver moving from one region to another, and the price of silver will be greater at the greater distances.

If the country which has the double tender (which merely for distinction sake we call France) happens to be in such a position that the ratio, say, of 15½ to one of gold is the price of silver at that point, and that is the legal ratio, then the currency will flow smoothly enough; but if there is now a greatly increased production of silver, the concentric rings round the mines will obtain cheaper silver, and as the wants have not increased the prices will be lowered. Let, however, France still continue to receive silver at the old price which is much higher than its worth, then France becomes a centre of high price, and around it are arranged a series of concentric rings from which pour to the centre constant supplies of silver, which will continue until it is no longer worth while to send the silver. This will occur when the silver is cheaper by only the difference of carriage between France and these rings.

Let now France attempt to trade with these nations—then these will say: "your silver is useless to us for we shall be carrying it from a place where it is dear to a market which is cheaper, so that there will be a double loss." They will, therefore, only deal with gold. Since gold and silver have the same purchasing power in France, the French will, for a very small consideration, such as will make it worth their while

to change, give their gold for its equal in silver, and this will go on until there is not a pound of gold left in the country.

For the future the wear and tear and natural increased demand for silver due to increase of population will require to be paid for by French merchandise. In this matter the French traders will at once trade with the market where silver is cheapest, and so cheap silver will gradually come into the country.

The gold also having all left it, the legal ratio becomes a myth, and traders exchange as if there was only a silver tender. Those who have to pay their debts will therefore also go and get their silver in the cheapest market, and at last the whole silver of the country will fal to that proper value which belongs to its distance from the mine. The loss experienced by the country is the difference in price between the natural price of silver and its worth at 15½ to 1.

But during this time the Law of the double Tender is by no means a dead letter. Let a sudden great demand for silver arise in another country so that only 14 pounds of silver can be got for one pound of gold, then traders who can get 15½ ponnds of silver for one of gold in France commence to carry gold to France, and for a slight consideration are allowed to take away the 15½ pounds of silver for every one pound of gold left. When the country becomes one of gold currency, it will have given away nearly a pound-and-a-half of silver for every gold pound which has entered France. Any slight change in the silver market will again withdraw the gold, and again bring a loss on the people.

These are facts not theories.

For instance, in 1835 India proclaimed a law of silver tender, and all the gold used in exchange began to leave the country. France became more and more a gold country by absorbing Indian gold, and gold from new mines, and sending away its own silver, so that in 1859 France had become practically a nation using a gold currency.

When in time India had obtained its additional supply of silver the traffic ceased, but the silver mines of the world still continued pouring out their annual supply, and indeed greatly increased it, so that every nation once more began pouring into France their silver and taking away its gold, so that in 1873 when Germany and America began coining great quantities of gold, and getting rid of their silver by its arbitrary demonetization, France became glutted with silver and a crisis was produced.

The effect upon England has been that the value of gold has greatly increased, for previously it was able to get cheap gold on the Continent, but the effect upon India has been remarkable.

Until the action of Germany in disarranging the ratio between silver and gold began, Indian silver was always cheaper than French silver, so that exportation of goods from India to France was checked by the impossibility of bringing dear silver to India; but when the fall of silver took place on the Continent, the exportations of merchandise from India enormously increased, and the amount of silver introduced into India, so cheapened it, that its exchange value fell to one shilling and sixpence to the rupee of two shillings. It might have continued at that rate, or more probably got much lower, had not the sufferings of Germany become so great, that it was compelled to stop mid-way in its course of changing the currency, and at the same time America passed a law ordering a large quantity of silver to be coined annually whatever the effect on the mint might be. By this means Indian exchange slightly recovered itself, and stands now at 1*s.* 8*d.* per rupee, but the country is at the mercy of France or Germany, and any return to demonetization in those countries will again bring down the exchange. In addition, India will have to bear the cost of all the cheapening of silver which arises from the supply of the mines being greater than the wants of the world, for countries with gold as a legal tender use very little silver, except for ornament. Any attempt which India might make to prevent this depreciation by establishing, by law, a gold currency would not only be disastrous on general principles, but would be doubly so because there is really no civilized country to which Indian silver could now be sent, and a market would have to be forced among the Chinese and Negroes.

It is said, that the law of a legal tender is a great boon to a community as it prevents debtors thrusting all kinds of heterogeneous commodities upon their creditors in payment of debt. To this I would answer, that the great want of getting their money back would probably weigh with creditors much more than a temporary inconvenience in the handling of the medium in which they are paid. But, if the payment in other metals than gold is an inconvenience, let the trader himself bargain that he shall get gold—he is not a child, and let him pay for his want of gold, and let the debtor bargain that if he pay in gold he shall pay only the exact number of units of value which the borrowed gold contained.

Laws only interfere with trade.

England borrowed an immense sum of money at the market value of the current coin of the day, and then passed a law making a steadily depreciating coin the legal tender in which at some future day it will repay all its debts!

On the other hand, some time ago, when gold and silver had an almost unchangeable ratio, which it was supposed would continue, India engaged to pay in gold the interest on certain sums which it borrowed in silver, meaning thereby to pay a certain number of units of value, but when the ratio between gold and silver greatly changed, it was found that India had made a bargain that was likely to cost it dear, and for which it has to thank the change of law in Germany or its own foolishness.

Directly the law of a legal tender is proclaimed men at once begin to secure themselves from loss. They have to pay debts, and meet demands on definite appointed days, and they will not take the risk of having to realize their goods on those days in gold which they may have to purchase at a high premium. Among ignorant people the loss that is occasioned by the conversion of their goods into gold is some times very great. Sir Arthur Cumming mentions that, in Fiji, when the time came for the people to pay their taxes in a coin not current amongst them, it was the general custom for the people to dispose of goods of three or four times the value required in order to get the coveted coin into their possession.

The necessity of interference with trade was an idea of olden times founded upon false conceptions of the duty of a Government, and it is now time that all such interference should be given up. Even in the matter of debt I think it would be much better if the law steadily refused to have any concern with it.

In England debts contracted by betting cannot be recovered by law, but such debts are paid just as honourably without the law as with it, and only when a man utterly breaks down does he refuse to pay a foolish debt, even though it was incurred without his having received previously any equivalent.

Traders desire of course that their debts should be recovered by law, just as they would desire the State to indorse their bills or send tug-boats to assist their ships of cargo when in distress. Interest on principal thus becomes much less, but as losses are less frequent the creditor bears

them less philosophically when they do come, and what he loses in interest by a debt-law he takes out in vengeance on a defaulting debtor.

In Ireland, the number of evictions which takes place through legal force has turned the Government into the landlords' agent for the intimidation of tenants, and if we lived in more loyal times I would speak more strongly of the result of the system in that country.

In India, the interference of the State is more deplorable in its effects, because the people dealt with are too timid to complain, and have no representative parliament in which to agitate their grievances, but it is a notorious fact that the most of the people are in the hands of money-lenders, who turn on the Government screw whenever it suits their purpose to molest or intimidate their debtors.

Why should the State interfere between creditor and debtor, and make one pay the other?

Let every trader calculate his losses from bad debts, as a fruit-seller estimates his loss from rotten apples, and charge accordingly.

When interest is low, men are constantly risking their money in the shares of worthless companies, and lose it, so that the misery produced under a law against debtors is much the same as the misery which would arise if debts were not recoverable by law. Ask any thrifty mechanic or tradesman who has saved a little money to keep himself in his declining years, which he would prefer—a high interest, and the risk of losing it, if he did not take care to lend it to an honest man, or a low interest with the Government to help him to get back his money? His answer would be, "the first, undoubtedly, for in the latter case I should lose my money any way, either through the rogue or the lawyers."

The disputes between landlord and tenant would be fewer, for the landlords would have to plough their own lands except when they could rent them to persons in whom they had confidence, so that land would be cheap, and the landholders would not be possessors of miles of country to the destruction of the country life of the nation.

The great openings for labour which have been developed by English rule in India, and by the enormous influx of capital which has taken place, have been so beneficial hitherto that the harassing of the poor for debt and rent has not been felt in all its intensity, but the slight commotions which have taken place in the Deccan and the Central Provinces, shew that the tyranny of the money-lenders and landlords is not unfelt.

The making of a law of "legal tender" appears to be a small interference with trade, for it only declares that if you offer gold in payment of your debt your offer is sufficient, but every restriction of trade or advantage given to one man over another is inevitably followed by damage of some sort to the community, and the utmost amount of meddling that a State can safely enter upon, or ought to venture upon, is to coin whatever metal is presented for coinage, marking each coin with a statement of its weight, and then allowing the people to dispose of these weights at such values as they choose, and in any way they like, taking their own risks of loss from debt, deterioration, depreciation, and such like.

The next point for consideration is, what the effect may be of the cheapening of silver or gold upon a country having a free currency, and what is the effect of such a cheapening of silver upon India in its present state of silver tender.

We have already pointed out that where there is a double tender every change of value in the metals is disastrous and may even become intolerable.

England has a double tender only to the extent of the value of 40 shillings in silver, but even this slight encumbrance is a serious loss, for the silver is not contained only in the mint, but every man who has ten shillings in his pocket will part with it for gold at a consideration, or if he has half a sovereign will exchange it for silver to his own profit, so that petty dealers are always dabbling in those metals at every rise and fall. In currency, silver is accepted simply as a gold-token, but it varies in circulation by the state of the market, and that variation always means loss to England.

If a hostile nation were to coin English shillings, or if it were legal for India to coin a silver token which should be the exact counterfeit of an English shilling, as Melbourne coins sovereigns, the whole difficulty of Indian exchange would vanish, for the worth of these tokens here would be ten pence in gold, while in England they are by law taken as a shilling. As the English mint would have no control over the issue of these foreign shillings, and every man in Britain would take 40 shillings instead of gold for a nominal consideration, then within a year or two the whole of England's gold would be in India, there would be a crisis in England, and its mint would be filled with silver which

it had been vainly attempting to withdraw in accordance with its own law of currency. Probably the course of trade now tends in the above direction, so far that every English shilling that can be found abroad, not melted down, is being carried to England for gold, and the gold is being brought here for silver. In fact it must have become so profitable a business to coin good English shillings abroad, or to forge them at home, that it is almost impossible to doubt that there are many new English shillings now in circulation which never passed through the English mint.

Smuggling is inevitable, and it will be very hard to put down, so that England's wisest course is to abolish the legal tender of silver as soon as possible. Until that time comes, India in common with Germany and other nations, is obtaining its crumbs of comfort in the shape of small remittances of English gold, and more will follow.

In a country of a complete gold tender, silver is a mere marketable commodity like tin or iron, and is always seeking an outlet for itself in a dearer market, and such also is the case with gold in a silver tender country. India is therefore always engaged with England which is practically a gold tender country in an exchange of its superfluous metals, gold leaving it and silver reaching it. In the present state of the market there is an influx of silver while there is no gold in the country. Gold, therefore, has to be brought to India at a loss to purchase the imported silver, but it never enters into the currency of the country. It is wholly given over to the importers of silver, so that the traffic is of this kind, that to make a shilling profit on silver, there is a loss of sixpence in the purchase of gold—of course much of the silver is paid for in merchandise.

The value of gold being now high, and the price of silver low, there cannot be a more favourable opportunity for India's returning to true principles of trade, and abolishing its silver tender. The silver trade would continue almost unaffected. The demand for gold in England is now so great that it would not be worth while to attempt to bring it to India to compete with silver, and yet the market would be free to take advantage of any change. If there is gold in India, and the conclusion of Mr. Clarmont Daniell is that there is a great quantity stored up in the coffers of the Indian Rajahs and used as ornaments on the necks of the women of the harems, the removal of the disability under which it

labourers by being unequally matched against silver would bring it to light and the confidence in the stability of the Government is so great that no fear of safety would prevent all who have gold using it in profitable trade.

So far as a mere currency is concerned it makes no difference to a country what its medium of exchange is so long as the coin is sufficiently plentiful for the people's wants. Gold may be more useful and valuable in the abstract, because less loss is incurred in the carriage of it, but with a poor people gold would be so little used that its advantages would be swallowed up in loss by interest from lying idle, while the people would be in great straits for a coinage suitable to their wants.

Silver, therefore, would still be used under a free currency in India, and only those who found it more profitable would deal in gold. At present it cannot be more profitable for the great trade of the country to use gold—not, because it is not wanted, but, because gold is handicapped to too great an extent by the State law of silver-tender in its contest with silver.

Traders under a system of free currency have nothing to fear from steady cheapening of silver. They deal with it and all metals as they would with other articles of merchandise. Commotions in the money market, arising from the foolish interference of other States, are dealt with by them as grand openings for new trade, and they rapidly adapt themselves to the new state of supply and demand. It is no doubt an evil that the prices of the precious metals are made so variable by unwise laws, that traders find it more advantageous to deal with metals directly than with other articles of exchange, for all who have fixed salaries in gold and silver feel every change, but there is nothing unusual or disquieting to trade in mere disarrangement of market prices for the great function of trade is to watch these changes, and make money out of them.

Thus the country which has a free currency has an advantage over foreign nations in trade, which will carry every thing before it, just as free trade in general, places the nation which uses it in a condition to compete successfully with any nation which labours under the disabilities of Protection Laws.

India is now fortunately in very much the condition of a country having a free currency. It has lost all it can lose on gold by its law of 1835. It has a currency eminently suited to its present wants, and

its only anxiety now should be that it shall not lose on its silver as it has lost on its gold, and this can only be surely prevented by abolishing its law of legal tender.

As things now stand, the Indian merchants are doing a good and easy trade with the world. They are carrying whatever gold they can get to England, because it is dearer there through its law of gold tender, and they are bringing silver to India, because they buy it cheap and sell it dear, because of the Indian law of silver tender. Their exportations are becoming greater every year, and there are vast openings for Indian wheat and other produce.

In thus trading with cheap silver in such enormous quantities, they are gradually cheapening silver in India, but that is a matter which daily rectifies itself, by each person who sells his merchandise altering his price to suit the changed demand, while labouring men who, in India, more than in any other country in the world, live on what they get, or at starvation point, will steadily increase their demand for more silver as it decreases in value.

In India when silver falls in value the people gain, for all the land of the country is taxed upon the supposed productive powers of each field in terms of silver instead of units of value, so that the people pay less taxes when silver has less power of purchasing wheat.

The State, on the other hand, is a great sufferer by the depreciation of silver, for it does not assign fresh taxes every year, but only at great intervals of 30 years, and in its richest Province it has fixed the tax on each field for ever at a fixed weight of silver, so that it has been obliged to curtail its expenditure, and especially with those countries where gold is the medium of exchange.

Its officials and dependents suffer equally with the Government as their nominal salaries do not rise as the units of value in silver decline, but they have the privilege, not unusual in servants, of feeling that they are sharers in their master's losses!

The depreciation of silver is also acutely felt by the Indian Government, because it is not only engaged in ruling, but carries on trade on a gigantic scale, and loses in so doing, for it cannot act freely on the traders' rule of thinking only of the gains of trade. One of the great trades of the Indian Government is the buying of goods in England, and bringing them for disposal to India.

Most countries provide their army and civil service with their wants by purchases made in their own lands; and, properly so, for none can carry goods backward and forward from one market to another so cheaply and efficiently as traders, but the Indian Government has set up an establishment in London, and pays there the interest on its debts, and buys all kinds of merchandise which it transmits to India and pays for in England.

It thus acts as a great trading firm, and is trying to make money by carrying goods from the cheapest to the dearest markets. A great deal therefore of the money which India appears to lose by loss in the exchange between silver and gold represents simply the balancing of mercantile transactions, though the malicious say that the reason why the balance is always against India is not altogether because of the loss by exchange, but that the loss is the sum which India is paying for the experience it is acquiring, that it is much the better plan to leave trade to traders.

But leaving this difficult point undecided, the real loss arises from the State having a decreasing annual income, and with it the necessity of making fixed annual purchases in England, so that the State feels the depreciation of silver to an acute extent.

There are also immense losses in the decrease in the value of railway fares, irrigation-rates and postage stamps, and in the loss by increase of wages of those persons who are in such a situation as to command an increase with every decrease in the value of silver.

The principal loss is, however, in the decrease of value in the land-tax. The theory of taxation in Political-economy is that every year the State calculates what its wants for the year will be, and then collects the necessary sum from the people in proportion to the income of each person, (or as some say their expenditure,) from poor and rich in exact proportion, as the benefits are proportionately the same.

Depreciation in the value of the currency does not in this way enter into calculation, for any change in the value of the coin would be allowed for in the following year.

The Parliament which fixes taxation has also an interest in keeping down the charges upon the people at as low a percentage as possible.

In practical politics every possible vagary has its day.

Monopoly, Protection, and what not, are all tried to make the necessary tax appear as light as possible, and to disguise its incidence by pretending to put it upon the shoulders of other people. It generally ends, where Protective duties are not levied, in fixing upon the poor man's little luxury of tobacco or salt, and then, calling the first a vicious drug, it taxes it out of all proportion, while upon the latter it fixes a tax which it hopes from its smallness will not be noticed.

The beer and spirits also which the poor throw away their spare money upon are heavily taxed as being very bad for men's constitutions and good people pay a high price for beer to reform their weaker comrades and keep them out of mischief. Hence a much larger proportion of the public taxes is paid by the poor than by the rich, unless a properly framed income-tax is also exacted.

But in whatever way the tax is apportioned or collected, the State's interference ceases with the tax, and all the people of the land are permitted to trade with, or prey upon, one another to their hearts' content. Trafficing in land is one of the most favourable methods of getting an income which men adopt, and the proportion of the population which lives upon rent, or gets money out of land which these persons do not themselves cultivate, is considerable.

Now the Indian Government has inherited the monopoly of land, and by acting as landlord of the country it destroys at one sweep half the avenues for the people's trade.

The share taken by the State is half the rent or half the produce of the fields when the cost of the probable labour has been allowed for, (for all other capital is a mere nothing,) besides additional cesses and taxes *ad nauseam*. The evils arising from this method of supporting the State are many and are manifest.

The State has a personal quarrel with almost every agriculturist in the country whenever it refixes the rent.

The landlords, who hold land jointly with the Government, are either always grumbling that they have no power to increase the rents of their lands or excuse their rack-rents by saying that they are entirely due to the great claims of Government which they have to meet. However disinclined the State may be to exercise undue pressure, it cannot avoid making many evictions, and ordering forcible sales of defaulters' property, and every such defaulter becomes a bitter enemy.

There is, in fine, constant friction between the people and Government which must tend to bring the latter into disrepute.

The idea of right in the soil is also greatly weakened by this Government claim for rent.

No man thinks the land is his own which he can do what he likes with, and upon which he can spend all his money without hindrance, and then sell for its full value. But the State-share always obtrudes itself to hinder progress and to drive away capital.

The great evil, however, of the land-tax lies in the overwhelming proportion of one's income which has to be paid to support the State. It keeps the people steeped in poverty.

The Government is no popular institution of King and Parliament for the support of which every man feels he must pay a trifle, if he wishes to live under settled laws and a strong Government, but it is the great pervading anxiety of a man's life to scrape together, year by year, enough of money to pay the Government demand. The Collector, as he is called, is not a mere tax-gatherer, at the time of whose coming you feel obliged to defer giving the new dress to your wife which may have been promised, but he is the Great Bread-eater who devours the children's food.

There is no doubt that the Indian Government endeavours to fix the rent mercifully, and that the people are much better off than they were in olden times. Especially great was the relief given to Bengal by Lord Cornwallis when he fixed the rent there for ever in silver, but the whole theory of a Government supporting itself out of rent instead of by an incident small tax upon the people's wealth, is so wrong and full of calamity to the people, that the depreciation of silver and every thing else which makes the taxation lighter, and the expenditure less, is an unmixed blessing to the land.

Politically and commercially, therefore, the cheapening of silver is no evil to the Indian people, while the loss to Government is not such as to make it worth while to increase its income against the people's interests. Its only course is to keep down its expenditure.

India is, in fact, a poverty-stricken colony struggling into existence as a nation, and having wealth as a State, merely because of the immense number of poor people who are over-taxed, but there is a strong desire amongst those in power to place it at once in the list of nations.

There is a temptation to use its army for purposes of conquest, and it is even being used to influence events in Europe.

Under such circumstances it may be necessary for the Indian Government to continue its high expenditure, and to replace its losses by exchange by additional taxation. The question, therefore, is frequently asked "can the loss by exchange be avoided by any measures which the Indian Government may take?"

We may put aside as impracticable the proposition that all the mines of the world should be controlled by a committee of nations who should only issue sufficient supplies of metal to meet the demand, and in such proportion as to keep the ratios of the metals' value constant. We may also suppose that it is not probable that countries having a double tender will continue to sacrifice their interest to the public good, even though recommended to do so by bi-metallists.

The purport of the first part of this Essay is to show that it is useless to affix any value to a sovereign in terms of labour or any other commodity, and, therefore, any attempt to bring gold into the country by declaring that it will be received at the mint at any definite price in silver will be a failure, unless the price fixed will bring profit to the trader and loss to the State.

Little depreciations of gold in other countries will arise from the greater use of a paper currency for sovereigns, and perhaps by a turn of fashion in favour of silver ornaments, but these advantages can only be obtained by those who choose to use them, and it is no part of the Indian Government's duty to bring them about.

Until the tender in silver is abolished, it would be useless to issue notes payable in gold. They would only be taken advantage of in exchange by traders sending the notes to London for the purchase of even cheaper silver than could be got in India, and the State would have to pay much of the cost of bringing all the gold to India which would be required in the trade.

The bank notes for silver which are now in circulation are very much used by the European traders, but they have made little entrance into the country trade. The reason may be partly due to the ignorance of the people, but chiefly, because a note is payable, say, at Calcutta, 1,000 miles off, or at Allahabad or Bombay, places which are they hardly know where. The people do not appreciate the advantages of using

such a promise to pay, and, therefore, in all villages and bazaars there is a discount charged of sixpence in the pound even to Europeans, while villagers cannot escape with even that loss.

Notes, however, which would take the form of a receipt for five or ten rupees when presented to the Collector on pay-day would probably have a considerable demand among villagers. The custom is to carry the rent when due to the Treasury, and there is a risk of the rupees being lost on the road, and in being kept in their houses till pay-day.

When they have arrived at the Court-house with their money, there is a loss of time in procuring the necessary audience with the Collector, in counting the money and getting receipts, so that a villager is fortunate if he can get off with a loss of three days from the time of his leaving his village till his return.

In favour also of these small notes is the fact that it is very difficult for the people to get their rent together, and it must be done by saving little sums from time to time or going to the money-lender. Whenever, therefore, they sold their hens or grain in the market, they would buy one of these pieces of paper, which to them would have a plain value, and meaning, and they would feel a satisfaction that so much of their rent was secure as those pieces of paper represented the receipt of. The notes would save time and risk, and the loss of interest in buying them in advance would not weigh very much with persons who are accustomed to hoard the little money they can save.

The interest thus acquired would be a clear gain to the State.

The danger of anticipating the State income would be small in a respectable country like India, but this could be avoided by giving the money over to the Currency Department to manage on the principles of ordinary paper currency.

It is only in some such form that an increase of taxation, because of depreciation of silver, could be brought about. Let it be supposed to be found necessary to increase the rent in such proportion that for every ten rupees now due a sum in rupees would require to be paid which would purchase a pound sterling in the market. Let a free currency be introduced at the same time. It would be impossible to obtain gold for at least two or three years, and then only in small quantities. In the mean time it might be ordered that in three years from date the taxes should be paid either in gold or paper to be issued in the place of gold.

This paper would take the form of a receipt for gold taxes on presentation before the Collector. It might at once be issued either at par or at such a rate that its worth through interest should amount to the value of the gold three years after date. The paper would be bought and sold in rupees, and the Collectors would feel it their duty in every possible way to prepare the people for the impending change by urging them to secure the paper in advance. It would of course be issued for only such small amounts of a sovereign or half a sovereign as would be suitable to the people's wants, and which they could employ in currency as bank-notes are now used.

Having thus prepared the people for the change it is not improbable that the notes would so rise in value that in three years their price in silver would slightly exceed the price of gold. They would be more convenient and safer to use, and gold would be much more difficult to get, there would, therefore, arise a gentle demand for gold which would gradually enter the country as soon as it was profitable to bring it. The fundamental points would be that the paper would be issued in exchange for silver, that it would always continue in the market with a silver value, and would exchange for gold eventually when there was a sufficiency of gold in the country. When that time arrived the Government would only issue these notes for gold or for the silver value of gold in the market of the day.

It would be a very important point not to sell them exclusively for gold, as the State demand is so great an item in the trade of the country, that an exclusive demand for gold would virtually bring about the evils of a legal tender in gold. The time will come when it will be just as easy for the people to pay in gold as silver, a law before that time would be an evil, and after that time would be unnecessary.

Apparently a more simple way of getting more money would be to increase the tax in silver in the ordinary way, and then whatever gold the State wanted it might buy, but I am inclined to think otherwise. Persons are accustomed to think of gold as worth a definite proportion of silver, and £10 in gold would only appear another way of saying Rs. 100 in silver, from which value all know silver has fallen, and would think it might fairly be made to return to it. Again, as the advantage acquired by silver in the country, has been a gift to it by the State's action in appointing a silver tender, it is only fair trading that the gold which has

been driven out of the country, and which is much wanted by the State should now be brought back again by that same silver which reaped a profit by its ejection.

If a mere extra-taxation in silver is made, and the silver tender is left unchanged, the purchase of gold at a loss will go on for ever, and the steady fall of silver will cause a constant change of rent to be made which will drive people frantic who do not understand the intricacies of exchange and taxation.

The grand rule, however, of a State should be not to carry out any measure of this kind which a private trader would not at once accept as a safe and profitable means of arriving at the end desired. Statesmen, however qualified to guide a nation to prosperity on principles of statecraft, may well feel a timidity creep over them when they enter upon the strange ground of profit and loss in exchange operations, and may reasonably doubt of the efficacy of any plan which proposes as an end in view to turn silver into gold. Hence, every proposal of such a character should be submitted to the rigorous investigation of commercial men before the country should be asked to carry it out in practice.

But there can be no doubt that any plan of helping the State's Finances which proposes to exact gold from people who have not got it, or any law which professes to help people to trade more easily with one another by forcing them all-to exchange their goods with only one article of merchandise, as silver or gold, or in fine any theory which leads the State to interfere with trade in order to benefit it, is a national calamity.

The duty of a State in regard to Trade is altogether of a negative character. It is to throw no hindrance of any kind whatever upon Free Trade and Currency throughout the world.

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G. T. CARRUTHERS.

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